National Institute of Environmental Health Sciences

Effects of climate change on animal and zoonotic helminthiases

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Abstract:

Current knowledge of animal and zoonotic helminthiases in which effects of climate change have been detected is reviewed. Climate variables are able to affect the prevalence, intensity and geographical distribution of helminths, directly influencing free-living larval stages and indirectly influencing mainly invertebrate, but also vertebrate, hosts. The impact of climate change appears to be more pronounced in trematodes, and is mainly shown by increased cercarial production and emergence associated with global warming. Fascioliasis, schistosomiasis (S. japonicum) and cercarial dermatitis caused by avian schistosomes have been the focus of study. Alveolar echinococcosis is currently the only cestode disease that climate change has been found to influence. Nematodiases, including heterakiasis, different trichostrongyliases and protostrongyliases, ancylostomiases and dirofilariases, are the helminth diseases most intensively analysed with regard to climate change. It may be concluded that helminth diseases should be listed among the infectious diseases with which special care should be taken because of climate change in the future, especially in temperate and colder northern latitudes and in areas of high altitude.

Source: http://www.ncbi.nlm.nih.gov/pubmed/18819671

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Temperature

Temperature: Fluctuations

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Global or Unspecified

Health Impact:

specification of health effect or disease related to climate change exposure

Dermatological Effect, Infectious Disease

Infectious Disease: Foodborne/Waterborne Disease, Vectorborne Disease, Zoonotic Disease

Foodborne/Waterborne Disease: Fascioliasis, Schistosomiasis

Vectorborne Disease: Mosquito-borne Disease

Mosquito-borne Disease: Dirofilariasis

Zoonotic Disease: Other Zoonotic Disease

Zoonotic Disease (other): echinococcosis; Ancylostomiases

Resource Type: ☒

format or standard characteristic of resource

Review

Timescale: ☒

time period studied

Time Scale Unspecified